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EXAMINER	
CAVALLARI, DANIEL J	
ART UNIT	**PAPER NUMBER**
2836	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/655,028	CAMWELL ET AL.	
	Examiner	Art Unit	
	Daniel J. Cavallari	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6-16* is/are allowed.

6)☒ Claim(s) *1-5,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *5/29/2007* .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

The Examiner notes that during an interview on 5/29/2007, the applicant pointed out that although claim 18 in combination of claim 1 was examined in the previous office action, claim 18 was multiply dependant on claims 2 and 3 and these combinations should have been examined as well in the previous office action. The Examiner agreed and informed the applicant that a new office action would be mailed out in which claim 18 was properly examined in view of claims 1, 2, AND 3. Therefore, this action is in response to the amendment of 10/26/2006.

The examiner acknowledges a submission of the amendment filed on 10/26/2006. The amendments to claims 1, 2, 3, 6, 12, & 14 are accepted.

Response to Arguments

The previously made objections to the drawings have been withdrawn in view of the replacement drawings submitted on 10/26/2006.

Applicant's arguments with respect to claims 1-5 & 17 have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowability of claim 18 is withdrawn. Rejections based on the newly cited reference(s) follow.

Claim Objections

Claims 17 & 18 are objected to because of the following informalities:

- Claims 17 & 18 recite "...the invention" wherein claims 1, 2, and 3 recite "A coaxial multiconductor plug and socket means..." Claim 18 should recite the same to maintain consistency and clarity.

  Appropriate correction is required.
- Claim 18 recites "...the simple electronic device" however claims 1 recites "a first simple electronic device" and "a second electronic device". There is a lack of antecedent basis for this claim. Claim 18/1 will be examined as best understood to mean "the first and second electronic device".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the

applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 & 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Sumi et al. (US 6,554,490).

In regard to Claim 1

A coaxial multi-conductor plug and socket means arrangement, said plug means having a plurality of plug contacts (See Figure 9b) thereon, adapted for insertion in said socket means, said socket means having a plurality of socket contacts disposed thereon, comprising:

- A first plug contact (ie. the second plug contact from the left, See Figure 9B) of said plug contacts electrically coupled to a first simple electronic device, read on by the electronic component 305, and at least one other plug contact electrically coupled to plug isolation means, read on by the left most contact connected to plug isolation means (324) (See Figures 8, 9A, & 9B).
- A first socket contact of said socket contacts (read on by the contact 303, See Figure 9B) electronically coupled to a second simple electronic device, read on by the component 306, and at least one other socket contact electronically coupled to socket isolation means, read on by the left most contact of contacts 314 coupled with socket isolation means, read on by switches 328, See Figure 8).

- The plug isolation means (324) activated only when the second simple electronic device is detected by the full engagement of the plug and socket (thereby producing the CNS signal) so as to then permit electrical current to flow to and/or from said at least one other plug contact thereon (read on by power contacts 315, See Figure 9B).
- The socket isolation means (328) activated only when the first simple electronic device is detected by the full engagement of the plug and socket so as to them permit electrical current to flow to and/or from said at least one other socket contact thereon (read on by the power contacts 315, See Figure 9B) [The examiner notes that the socket isolation means (328) is controlled by the socket isolations means (324) which is activated only when the CNS signal is produced by the first and second simple electronic devices (306 & 305) only when the plug is fully inserted into the socket (See Column 9, Line 29 to Column 10, Line 7).

In regard to Claim 2

A coaxial multi-conductor plug and socket arrangement comprising:

- A pair of plug contacts, read on by the contacts of the plug 111, See Figure 9B, electrically coupled to each other via a simple electronic device, read on by the electronic device comprising components 306 & 302 (See Figure 9B) [The examiner notes that the simple electronic device is responsible for electrically coupling the contacts together through switch 328 to the IEEE1394 communication circuit].

- A pair of socket contacts, electrically coupled to electronic isolation means (328) [The examiner notes that all sockets are coupled to the isolation means 328, See Figure 9B].
- The socket isolation means being activated only when current is detected in the simple electronic device upon full engagement of the plug and socket arrangement [The examiner notes that this is achieved when the CNS signal is produced and sent to the circuit 324 which activates the socket isolation means 328, See Figure 8].

In regard to Claim 3

A coaxial multi-conductor plug and socket arrangement comprising:

- A pair of plug contacts, read on by the contacts of the plug 111, See Figure 9B, electrically coupled (via IEEE1394 communication circuit) to a simple electronic device, read on by the electronic device comprising components 306 & 302 (See Figure 9B).
- A pair of socket contacts, electrically coupled to electronic isolation means (328) [The examiner notes that all sockets are coupled to the isolation means 328, See Figure 9B].
- The socket isolation means being activated only when current is detected in the simple electronic device upon full engagement of the plug and socket arrangement [The examiner notes that this is achieved when the CNS signal is

produced and sent to the circuit 324 which activates the socket isolation means 328, See Figure 8].

In regard to Claim 4/1, 4/2, 4/3

- The plug and socket each comprising fixed diameter barrel-style coaxial bodies (See Figure 1).

In regard to Claim 5/1, 5/2, 5/3

- The isolation means incorporates a time delay circuit (See Column 9, Line 62 to Column 10, Line 7) that maintains electrical isolation between the plug and socket for a fixed period of time in order that there is adequate time to fully engage the plug and socket assembly and thereby avoid false activation.

In regard to Claim 17/1, 17/2, 17/3

- The plug and socket each comprising fixed diameter barrel-style coaxial bodies (See Figure 1) and the isolation means incorporates a time delay circuit (See Column 9, Line 62 to Column 10, Line 7) that maintains electrical isolation between the plug and socket for a fixed period of time in order that there is adequate time to fully engage the plug and socket assembly and thereby avoid false activation.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahasi (US 6,192,435 B1).

Takahasi teaches:

In regard to Claim 1

A coaxial multi-conductor plug (30) and socket (20) means arrangement (See Figure 2), said plug means having a plurality of plug contacts thereon, adapted for insertion in said socket means, said socket means having a plurality of socket contacts disposed thereon, [The Examiner notes the term "coaxial" in the preamble lacks structural limitations which would further limit the term. The Merriam-Webster dictionary defines the term "coaxial" as "having coincident axes" and "coincident" as "of similar nature" and "axes" a "a straight line with respect to which a body or geometric figure is symmetrical". The Examiner further notes that the 4 contacts are "coaxial" in nature in that the two pairs share a symmetrical axis between the two pairs] comprising:

- A first plug (30) contact of said plug contacts electrically connected to a first simple electronic device, read on by resistor (R1) and another electrical contact electrically coupled to plug isolation means, read on by switch (SW1), which is activated upon full engagement of the plug and socket arrangement (See Figure 2 & Column 7, Line 56 to Column 8, Line 10).
- A first socket contact of said socket contacts electrically coupled to a second simple electronic device, read on by power source (V), and at least one other contact electronically coupled to socket isolation means, read on by switch (10) which is activated upon full engagement of the plug and socket arrangement (See Column 9, Lines 53-67).

- The socket isolation means (10) coupled with the plug activated only when the second simple electronic device is detected by full engagement permitting current flow from the contacts (See Column 4, Lines 43-50 & Column 7, Line 56 to Column 8, Line 58).

In regard to Claim 2

A coaxial multiconductor plug and socket arrangement comprising:

- A pair of plug (30) contacts, read on by the upper and lower contact in Figure 2, coupled via a simple electronic device, read on by resistor (R2) wherein the isolation means coupled with the plug is activated only when the second simple electronic device is detected by full engagement permitting current flow from the contacts (See Column 4, Lines 43-50 & Column 7, Line 56 to Column 8, Line 58) (See Figure 2).
- A pair of socket contacts, read on by the upper most and bottom most contacts in Figure 2, electrically coupled via an electronic isolation means (SW1) which is activated upon full engagement of the plug and socket arrangement (See Column 9, Lines 53-67), as is the case when the socket and plug are connected (See Figure 2).
- The socket isolation means being activated only when a current is detected in the simple electronic device (R2) upon full engagement of the plug and socket arrangement (See Column 7, Line 56 to Column 8, Line 58).

In regard to Claim 3

A coaxial multiconductor plug and socket arrangement comprising:

- A multi-conductor plug (30) and socket (20) (See Figure 2) having a plug and socket, each with a plurality of contacts, read on by the female and male pins (See Column 4, Line 65 to Column 5, Line 9) comprising a pair of socket contacts, read on by the upper two pins (See Figure 2) coupled to a simple electronic device, read on by voltage source (V) and resistor (R2), as is the case when the plug and socket are connected.
- A pair of plug contacts, read on by the upper two pins of plug (30) (See Figure 2), electrically attached to electronic isolation means (10) which is only activated when current is detected in the simple electronic device upon full engagement of the plug and socket, wherein current is detected in the voltage source (V) via the resistor (R2) (See Figure 2 & See Column 4, Lines 43-50 & Column 7, Line 56 to Column 8, Line 58).
- The isolation means (10) being activated only when a current is detected in the simple electronic device (R2) upon full engagement of the plug and socket arrangement (See Column 7, Line 56 to Column 8, Line 58).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 18/1, 18/2, & 18/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumi et al. in view of Wood (US 5,726,506).

In regard to Claim 18/1

Incorporating all arguments above in regard to Claim 1, Sumi et al. (hereinafter referred to as Sumi) fails to teach the use of diodes.

Wood teaches the use of current direction-limiting means (ie. diodes) (See Figure 1) used to protect against reverse current. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate diodes on the supply lines, as taught by Wood, into the device of Sumi in which diodes were placed on the supply lines (314) in which to prevent reverse current and signals from interfering with the source. [The Examiner notes that the diodes read on the first and second simple electronic device of Claim 1 wherein the previously cited references to the first and second simple electronic device become moot].

In regard to Claim 18/2

Incorporating all arguments above in regard to Claim 2, Sumi et al. (hereinafter referred to as Sumi) fails to teach the use of diodes.

Wood teaches the use of current direction-limiting means (ie. diodes) (See Figure 1) used to protect against reverse current. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate diodes on the

supply lines, as taught by Wood, into the device of Sumi in which diodes were placed on the supply lines (314) in which to prevent reverse current and signals from interfering with the source. [The Examiner notes that the diodes read on the first and second simple electronic device of Claim 1 wherein the previously cited references to the first and second simple electronic device become moot. The Examiner further notes that the plug and socket contacts would be electrically coupled to each other via the diodes on line 314 (See figure 9B) through switches 328 and circuit 106 (See Figure 8).

In regard to Claim 18/3

Incorporating all arguments above in regard to Claim 3, Sumi et al. (hereinafter referred to as Sumi) fails to teach the use of diodes.

Wood teaches the use of current direction-limiting means (ie. diodes) (See Figure 1) used to protect against reverse current. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate diodes on the supply lines, as taught by Wood, into the device of Sumi in which diodes were placed on the supply lines (314) in which to prevent reverse current and signals from interfering with the source. [The Examiner notes that the diodes read on the first and second simple electronic device of Claim 1 wherein the previously cited references to the first and second simple electronic device become moot. The Examiner further notes that the plug and socket contacts would be electrically coupled to each other via the diodes on line 314 (See figure 9B) through switches 328 and circuit 106 (See Figure 8).

Claim 18/1, 18/2, & 18/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Wood (US 5,726,506).

Takahashi fails to teach the use of a first and second diode with the apparatus however Wood teaches the use of a first diode on a supply supple side (ie. 23) for use against protection against backflow to an attached DC source (6) (See Figure 1 & Column 5, Lines 13-35) and second diode on a load side (23) to prevent backflow of current to the source [The Examiner notes that the diode thereby read on the first and second electronic devices of Claims 1, 2, & 3].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the diodes as taught by Wood into the invention of Takahashi on the four plug and four socket lines (See Figure 1). The motivation would have been to prevent a backflow of current from the load portion of the device to the power source (V).

Allowable Subject Matter

Claims 6-16 are allowed for reasons indicated in the office action of 1/22/2007.

Conclusion

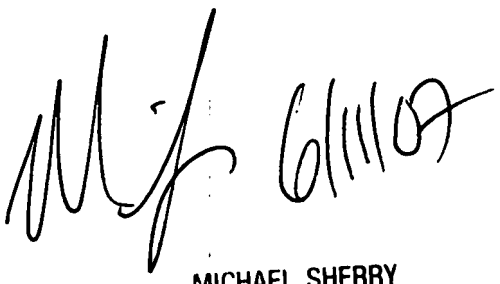
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Cavallari whose telephone number is (571)272-8541. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Cavallari

June 4, 2007



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